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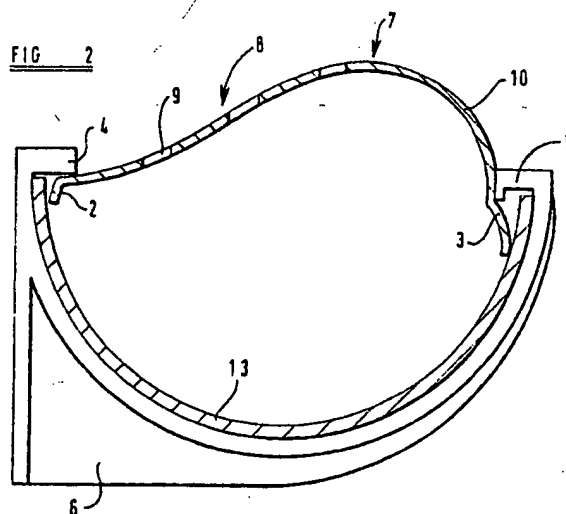
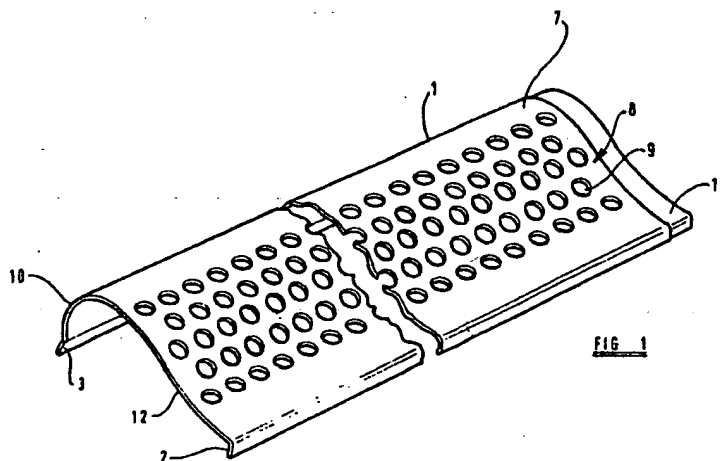
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GB A 2084210 GB 0944099 GB 0331442
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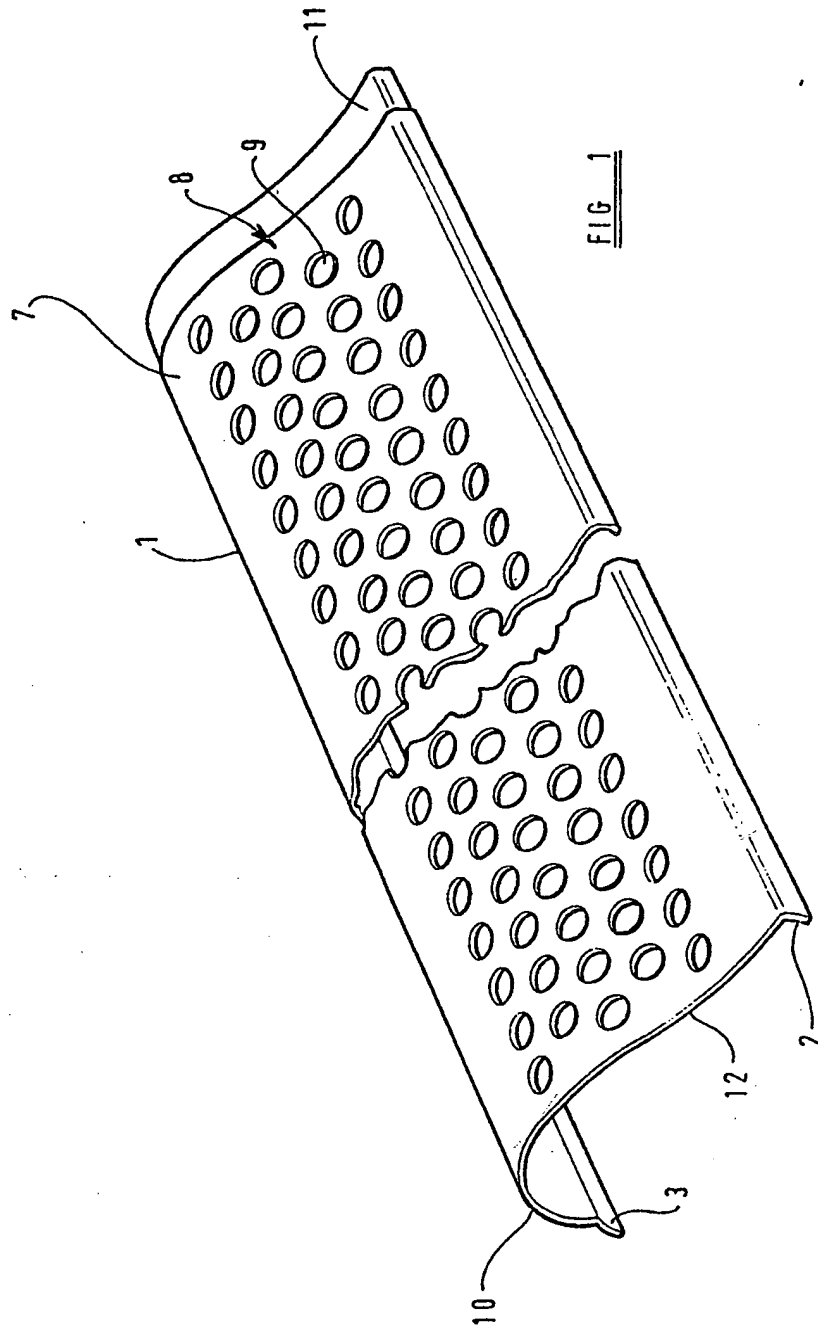
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E1D

(54) Gutter leaf-guard unit

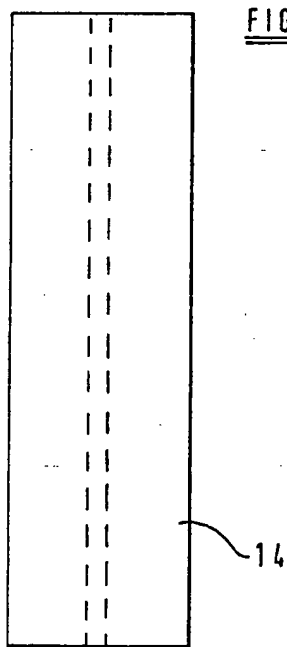
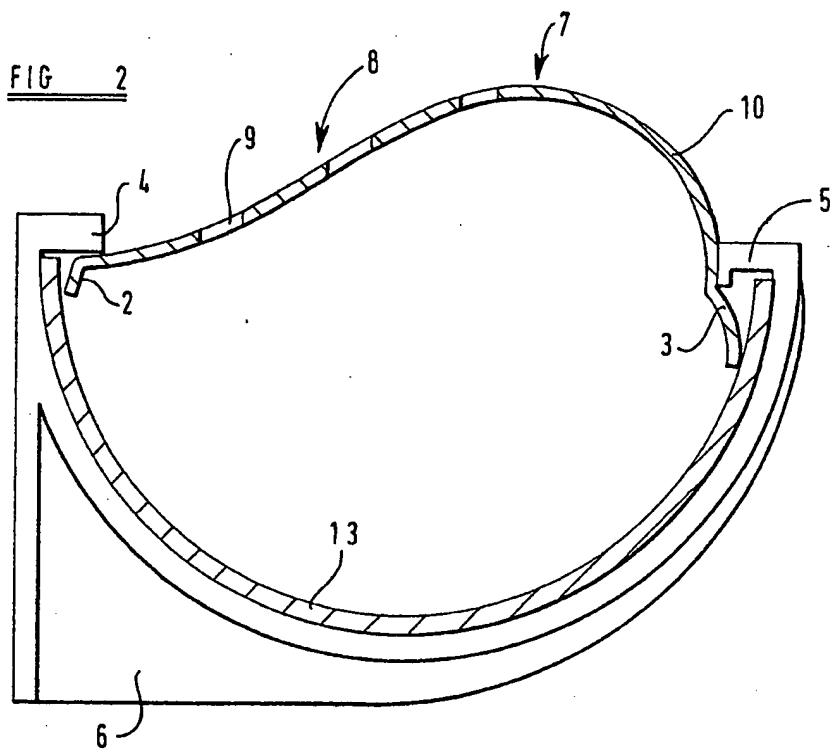
(57) The unit (1) comprises a plastics material cover that can be snap-fastened to the gutter. The cover has a plurality of apertures (9) to permit water or other precipitation to enter the gutter but to minimise or prevent the ingress of leaves or other debris. Two downwardly depending tips (2 and 3) are dimensioned to be snap-fastened to the inwardly protruding arms (4 and 5) of a gutter support bracket (6). A stepped portion (11) may be inserted under the free end (12) of a further unit (1).



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SPECIFICATION

Improvements in or relating to an anti-fouling unit

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THE PRESENT INVENTION relates to an anti-fouling unit and more particularly to an anti-fouling unit for use with guttering.

- 10 On most buildings having pitched roofs, guttering is provided at the lower edge of each sloping part of the roof to catch rain water running off the roof, and to lead the rain water to an appropriate down pipe. Such guttering is usually formed of plastics material, or may be formed of asbestos or even metal. The guttering is usually a semi-circular channel.

- 20 Guttering of the type may become fouled or blocked, for example by leaves from trees or by birds nests or the like.

The present invention seeks to provide an apparatus for preventing or minimising blockage of a gutter.

- 25 According to one aspect of this invention there is provided an anti-fouling unit for minimising fouling of a gutter said anti-fouling unit comprising an elongate member dimensioned substantially to cover an elongate gutter, said member being provided with a plurality of apertures therein dimensioned to permit rain or other precipitation to enter the gutter, but to minimise the ingress of leaves or similar debris into the gutter.

- 35 Preferably said elongate member is formed of a plastics material.

Conveniently said member is snap-fastenable to the guttering by snap-fasteningly engaging one or more guttering support brackets.

- 40 Advantageously the unit incorporates or is associated with means for interconnecting the unit to another adjacent similar unit. Thus the unit may be provided with an inwardly stepped portion adapted to be engaged within the free end of another corresponding unit.

- 45 Alternatively said connecting means may comprise a resilient connecting component adapted to receive the two adjacent ends of two adjacent units.

- 50 According to another aspect of this invention there is provided a gutter assembly, said gutter assembly comprising a length of guttering and an anti-fouling cover mounted to cover the open part of the guttering, said cover being provided with a plurality of apertures therein to permit rain or other precipitation to enter the gutter but to minimise or prevent the ingress of leaves or other debris.

- 55 Preferably said anti-fouling unit is at least partially removable from the guttering to permit the clearing of any material tending to block the gutter.

- 60 In order that the invention may be more readily understood, and so that further features thereof may be appreciated, the invention will now be described by way of example

with reference to the accompanying drawings in which:

- 70 *Figure 1* is a perspective view, partly broken away, of an anti-fouling element in accordance with the invention for use with a conventional gutter;

- 75 *Figure 2* is a cross-sectional view of a gutter provided with an anti-fouling element as illustrated in Fig. 1, a support bracket for the gutter being illustrated in side elevational view;

- 80 *Figure 3* is a top plan view of an element for interconnecting two anti-fouling elements according to the invention; and

- 85 *Figure 4* is an end elevational view of the element shown in Fig. 3.

- Referring to Figs. 1 and 2 an anti-fouling element 1 in accordance with the invention comprises an element that is integrally moulded of a suitable plastics material. The plastics material used need not have any significant strength, but should be of a type that does not deteriorate over-rapidly when exposed to the atmosphere, sunlight and precipitation.

- 90 The element illustrated in Fig. 1 comprises an elongate element, having at its longitudinally extending side edges, two downwardly depending lips, 2, 3. These lips are dimensioned to be snap-fastened to the inwardly protruding arms 4, 5 of a conventional guttering support bracket 6 as will be described in more detail hereinafter with reference to Fig. 2.

- 100 The elongate member 1 has, between the downwardly depending lips 2, 3 an arcuate portion that rises to an apex or crest 7. The apex or crest is not centrally located, but is closer to the lip 3 than it is to the lip 2. The portion 8 of the elongate member 1 between the crest 7 and the lip 2 slopes downwardly relatively gently and is provided with a plurality of circular apertures 9. The portion 10 of the elongate member 1 between the crest 7 and the lip 3 curves downwardly relatively rapidly and is not perforated.

- 110 At one end of the elongate member 1 there is provided an inwardly stepped portion 11 which is adapted to be inserted under the free end 12 of another corresponding elongate member 1 to enable an effectively continuous element to be produced.

- 115 Referring now to Fig. 2 a conventional gutter support bracket 6 has two inwardly directed arms 4, 5 and defines a recess that accommodates a length of guttering 13. The guttering 13 is snap-fitted within the supporting bracket 6 and the supporting bracket 6 is provided with means by which the bracket may be mounted in position on a building immediately beneath the edge of a pitched roof.

- 120 As can be seen from Fig. 2 the elongate element 1 has been mounted in position substantially to cover the guttering. Initially the
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lip 2 of the elongate member 1 is inserted under the inwardly directed arm 4 of the gutter supporting element 6, and subsequently the elongate member 1 is slightly deformed to enable the lip 3 to be slid past at the end inwardly directed arm 5 so that the elongate element 1 occupies the position illustrated in Fig. 2. The elongate member is thus snap-fastened to the bracket 6 and is securely mounted in position. A plurality of corresponding elongate elements may be mounted end-to-end with the projection 11 of each element inserted under the free end 12 of the next adjacent element. Of course, the elements may have to be cut to length and may have to be chamfered to accommodate corners in the guttering.

The elongate elements effectively form a continuous cover for the guttering. The circular apertures are not sufficiently large to permit leaves or other materials to pass through the apertures, and thus only water directed from the roof towards the guttering will pass through the apertures 9. It is, of course, to be understood that the element 1 will be located in such a position on the guttering that the apertured portion 8 of the elongate element 1 is directed towards the roof so that water or other precipitation coming from the roof into the guttering will pass readily through the apertures 9. The steeply sloping portion 10 of the element 1 will tend to minimise any splashing or overflowing of the guttering when significant quantities of precipitation are falling.

It is envisaged that an anti-fouling cover in accordance with the invention may readily be fitted to a conventional guttering, thus effectively preventing leaves or other materials from blocking the guttering.

Whilst the invention has been described with reference to an embodiment in which a special projection 11 is provided at the end of each element 1 to co-operate with the free end 12 of the next adjacent element 1, it is envisaged that in an alternative embodiment no such lip 11 will be provided, but instead a plurality of connecting elements 14 will be utilised. Each such connecting element, as illustrated in Figs. 3 and 4 comprises a member of substantially "H" cross-section formed of a resilient or rubber-like material. One end of one element may be inserted in the channel 15 defined by one pair of arms of the "H" and another element may be inserted in the channel 16 defined by the remaining parallel arms of the "H" the resilient member may be shaped to have a configuration corresponding to the cross-sectional configuration of the cover element.

Whilst the invention has been described with reference to one embodiment it is to be appreciated that many modifications may be effected to the described embodiment without departing from the scope of the present inven-

tion. Thus the shape or appearance of the cover element may be altered significantly without departing from the scope of the invention. Also the element may be permanently connected to the guttering, but it is preferred that the element should be at least hingeable relative to the guttering, since it is conceivable that grit from roofing tiles or other fine debris may enter the guttering through the apertures 9 and, over the passage of a number of years, build up a sediment. Thus it is preferred that the cover should be at least partially removable to enable such a sediment to be cleared from the gutters. It is to be noted that it is envisaged that such sediment clearing will only have to be performed at very infrequent intervals, whereas conventional uncovered gutters may often required to be cleared at least once a year, particularly if the house or building to which the gutters are connected is located near a significant number of deciduous trees.

CLAIMS

1. An anti-fouling unit for minimising fouling of a gutter said anti-fouling unit comprising an elongate member dimensioned substantially to cover an elongate gutter, said member being provided with a plurality of apertures therein dimensioned to permit rain or other precipitation to enter the gutter, but to minimise the ingress of leaves or similar debris into the gutter.

2. An anti-fouling unit according to claim 1 wherein said elongate member is formed of a plastics material.

3. An anti-fouling unit according to claim 1 or claim 2 wherein said member is snap-fastenable to the guttering by snap-fastly engaging one or more guttering support brackets.

4. An anti-fouling unit according to any one of the preceding claims incorporating or associated with means for interconnecting the unit to another adjacent similar unit.

5. A unit according to claim 4 wherein one end of the unit is provided with an inwardly stepped portion adapted to be engaged within the free end of another corresponding unit.

6. A unit according to claim 4 wherein said connecting means comprises a resilient connecting component adapted to receive the two adjacent ends of two adjacent units.

7. A gutter assembly, said gutter assembly comprising a length of guttering and an anti-fouling cover mounted to cover the open part of the guttering, said cover being provided with a plurality of apertures therein to permit rain or other precipitation to enter the gutter but to minimise or prevent the ingress of leaves or other debris.

8. A guttering assembly according to claim 7 wherein said anti-fouling unit is at least partially removable from the guttering to

permit the clearing of any material tending to block the gutter.

9. An anti-fouling unit substantially as herein described with reference to and as shown in the accompanying drawings.

10. A gutter assembly substantially as herein described with reference to and as shown in the accompanying drawings.

11. Any novel feature or combination of features disclosed herein.

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